MEMO

DATE: August 23, 2006

TO: Regional Council

FROM: Jim Gosnell

SUBJECT: Shanghai Maglev Delegation Report

SUMMARY:

Attached is a report of the Shanghai Maglev trip which took place July 17-19, 2006. Included are the participants , the itinerary, and who we met, and a brief summary of information received.

Shanghai Maglev Delegation Summary
Monday, July 17, 2006 - Wednesday, July 19, 2006

Delegates:

County of Los Angeles

Yvonne B. Burke - Los Angeles County Supervisor - 2nd District

City of Los Angeles

Bernard C. Parks - Councilmember, City of Los Angeles - 8th District
Bill Rosendahl - Councilmember, City of Los Angeles - 11th District
Greig Smith - Councilmember, City of Los Angeles - 12th District
Gerry F. Miller - Chief Legislative Analyst, City of Los Angeles

City of Torrance

Paul Nowatka - Mayor Pro Tem, City of Torrance

City of West Covina

Steve Herfert - Mayor, City of West Covina
Mike Touhey - Mayor Pro Tem, City of West Covina

City of San Gabriel

Harry Baldwin - Councilmember, City of San Gabriel

City of Ontario

Alan D. Wapner - Mayor Pro Tem, Ontario

Pechanga Tribe

John Palinkas -Pechanga Tribe of Luiseño Indians

Staff:
Jim Gosnell, Deputy Executive Director

Others:
Walter Buss, President - Transrapid USA
David Chow, Director - IBI Group
Chris Robert, Principal - The Robert Group
Laura Muna-Landa, Senior Associate - Arellano Associates

Highlights of Delegation Activities

- Tour and general overview of City of Shanghai, China
- Understanding of the magnitude and scale of urban planning in Shanghai

- Meeting with Deputy Secretary General of Shanghai, Shen Jun and other city officials
- Meeting with Commander Wu, Director of the Shanghai Maglev Transportation Engineering R&D Center in charge of the design and construction of the Shanghai Maglev System. Prior to the maglev project, Commander Wu was the Project Director for the design and construction of the Pudong International Airport.
- Understanding of the Chinese application of the maglev technology
- Understanding of the future extension plans for the Shanghai system

Sunday, July 16

Arrival in Shanghai, China and first hand experience of riding maglev as a regular airport passenger.

Monday, July 17

Organized tours of the City of Shanghai for an understanding of the urban planning context, cultural history, and scale of development currently undergoing in Shanghai. Highlights include:

- Jin Mao Building, tallest building in China, third tallest in the world
- Huangpu river tour
- Jade Buddha Temple, a key cultural and architectural edifice
- Visit to the Bund, European colony within Shanghai which has been maintained through the cultural revolution.

Tuesday, July 18

Visit to the Shanghai Urban Planning Exhibition Center and meeting with the Deputy Secretary General of Shanghai, Shen Jun and Deputy Director of the Shanghai Urban Planning Administration Bureau, Wu Jiang.

Topics of Discussion with Deputy Secretary General

- Reason for technology selection for Shanghai, China
    - High/next generation technology and availability
    - High Speed/Ride Comfort
- Overview of existing maglev system

- 19 mile, double-track project connecting Shanghai to the new Pudong International Airport
- World's first commercial application of high-speed maglev.
- Peak operating speed of 267 mph, each one-way trip has a duration of less than eight minutes.
- System has been operating in revenue service seven days per week since 2003 and has seen more than 7.5 million passengers to date

- Two year schedule for the planning design, and construction of the starter system from conception to opening day.
- The current termination of the starter system at Long Yang Road was designed to allow intermodal transfer to the City's subway station.
- The system is now in the planning stages for an extension to connect Shanghai to Hangzhou in the south
  - The system will extend approximately 110 miles with a speed of approximately 280 mph and 40 minutes travel time.
  - Stops will include the 2010 World Expo site, the Shanghai South Railway Station, the Shanghai Hongqiao International Airport - (fulfilling an airport connector role), the City of Jiaxing and the City of Hangzhou

- The plan is to have the system operational in time for the 2010 World's Expo in Shanghai.
- The extension will allow more Chinese development of maglev components based on the German TRI technology.
- This will include the development of vehicle bodies, stator packs, and certain control system components.
- Additional refinements to be conducted by the Chinese will include
  - Guideway structures
  - Vehicle bodies to increase aerodynamic performance and decrease air friction noise

- Summary of the cost to build the Shanghai system was shared but is not directly applicable for US cost comparisons due to base material and labor cost differences.
- Exchange of Delegation Gifts and Photo Opportunity

Visit with Shanghai Urban Planning Exhibition Center

- Summary presentation on the current and future City of Shanghai using a scale model with a focus on existing and future developments in the City
- Computer simulation tour of the key infrastructure to be built in the City within the next 10 years including airport expansion, elevated freeway systems, transit enhancements, significant buildings and maglev extension.
- Hosted discussion with question and answer session on the development plans for the City of Shanghai.

Wednesday, July 19

Focus day on the Shanghai maglev system. The maglev system tour consisted of the following key events:

- Presentation and meeting with Commander Wu and key technical staff
- Travel to Long Yang Road (LYR) maglev station exhibition hall and operation control center visit
- Visit maglev station at LYR
- Maglev ride LYR-Pudong International Airport (PIA)
- Visit maglev station at PIA
- Maglev ride PIA-LYR
- Drive along the maglev guideway and stop-off to experience maglev "fly-by" at 150 mph and 250 mph.

Topics of Presentation by Commander Wu

- Overview of Maglev system
- Technology of Maglev system
- Safety of Maglev system
    - Chinese and German officials conducted numerous safety tests by rigorously testing the construction and assembly of the guideway, electromagnetic system and vehicle control system, as well as the safety measures, emergency management system, passenger service system and environmental impact, etc. during the safety test period. The result was the compilation of 300 documents assessed by safety experts. They came to the main conclusion that the maglev system developed in Germany and mutually completed

by German and Chinese engineers had attained full technical maturity and was not only completely functional, reliable, and safe in every situation, but also capable of competing economically with all existing high-speed steel-wheel transit systems.

Presentation by David Chow

- Overview of SCAG Initial Operating Segment (IOS), maglev system proposed in Southern California
- Proposed alignment route and design
- Station concepts
- Schedule for deployment and next steps

Thursday, July 20
Travel back to United States